UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2192	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/697,752	BERGMAN ET AL.
Office Action Summary	Examiner	Art Unit
	Thuy Dao	2192

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2009*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-37* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *29-37* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *30 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment filed on August 6, 2009.

2. Claims 29-37 have been examined.

Response to Amendments

3. In the instant amendment, claims 29 and 26 have been amended; and claim 37 has been added.

Response to Arguments

4. Applicants' arguments have been considered.

      a) Applicants stated, "*In particular, Applicants have made clear that the step/operation of customizing the control of the user-interface by installing a user-interface control is performed <u>in response to the recording step</u>. This is not the case with Wolfman. The <u>so-called customization</u> of the user SMARTedit interface in FIG. 2 to the SMARTedit/DIAManD user interface of FIG. 4 that the Examiner points to, <u>is done by the application programmer not the application user</u>...*" (Remarks, page 6, third paragraph, emphasis added).

      As an initial matter, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the so-called customization ... <u>is done by</u> ... <u>the application user</u>") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

      In the instant case, the plain language of claims merely recites "*...<u>at least one processor</u>, coupled to the memory operative <u>to: (i) record</u> a procedure description comprising a series of actions performed by a user in the application user-interface; and <u>(ii) in response to the recording operation, customizing</u> the control of the user-interface of the existing application ...*" (claim 29, lines 4-7, emphasis added).

      Per the plain language of the claims, Wolfman discloses:

at least one processor ... to: (i) record a procedure description comprising a series of actions performed *by a user* in the application user-interface (e.g., col.4: 59 – col.5: 25,

> "We have implemented this interface in the SMARTedit
> PBD system for text-editing. For example, a simple task for
> SMARTedit is to delete HTML comments from a text file. <u>A user</u>
> demonstrates this task by <u>starting the macro recorder,</u> moving the
> cursor to the next comment, selecting the comment with the shift
> and cursor keys, and pressing the delete key to delete it (Figure 2).
> <u>She then stops the macro recorder. After this demonstration,</u> one of
> SMARTedit's candidate programs is <u>a program consisting of three</u>
> <u>actions</u> of the form move to the next occurrence of <!--, select to
> the next occurrence of -->, and delete the selection)" - emphasis
> added.

(ii) in response to the recording operation, customizing the control of the user-interface of the existing application (e.g., col.4: 59 – col.5: 25 above, "<u>After this</u> <u>demonstration, ...</u>" (*"in response to the recording operation"* as claimed*)* → col.12, lines 8-23, customizing an SMARTedit user-interface <u>by installing an "enhanced" SMARTedit</u> <u>application</u>, wherein said enhanced/customized user interface has an <u>original user</u> <u>interface</u> illustrated in col.5, FIG. 2).

b) Applicants further stated,

> "Secondly, Applicants have made clear that the user-
> interface control is <u>specific</u> to the procedure description in the
> existing application for automatic execution of the procedure
> description and generation of the series of actions performed by the
> user when the user-interface control is activated. This is not the
> case in Wolfman. That is, the "controls" in the "Interaction Control
> Panel" in the SMARTedit user interface of FIG. 4 of Wolfman are
> not specific to any recorded procedure. That is, the "controls" are

generic, i.e., "record one step," "step," "run to end of example"...
"jump and record an example." " (Remarks, page 6, fourth
paragraph, emphasis added).

Examiner respectfully disagrees. Wolfmann discloses *installing a user-interface
control specific to the procedure description in the existing application for automatic
execution of the procedure description and generation of the series of actions
performed by the user when the user-interface control is activated:*

col.4: 59 – col.5: 25 above, "After this demonstration, ..." ("*specific to the
procedure description...*" as claimed);

col.5, FIG. 2, an original user interface of SMARTedit application;

col.12, FIG. 4, an enhanced/customized user interface of SMARTedit application;

col.13: 5-21: the enhanced/customized user interface in FIG. 4 includes

"Step", a collaborative solution mode. We also introduced
three entirely new interaction modes:

- "Run to end of example" successively presents the sys-
  tem's guesses for each step up to the end of the current
  example. After a brief pause to allow the user to in-
  terrupt, the system commits the guess. This interaction
  mode is from the system solution category.

- The "Run while sure" interaction immediately executes
  the learned program step by step until the system's con-
  fidence in the program at any step drops below a thresh-
  old (currently 99.9%). This interaction is a performance
  mode.

- Finally, we introduced system example selection in the
  form of the "Jump and record an example" mode. In this
  mode, the system repositions the cursor to just before an
  example that is particularly confusing to the system and
  asks the user to demonstrate that example.

Claims 30-35 are also rejected based on virtue of their dependencies on the rejected base claim 29. Independent claims 36 and 37, which recite(s) the same limitations as those of claim 29, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claim 36 and 37.

Claim Rejections - 35 USC §102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 29, 31, 32, and 34-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolfman (art of record, "Mixed Initiative Interfaces for Learning Tasks: SMARTedit Talks Back").

Claim 29:

Wolfman discloses an article for manufacture and an apparatus for customizing a control of a user-interface of an existing application comprising:

a memory; and at least one processor (e.g., col.3:42 - col.4: 28), coupled to the memory operative to:

a user-interface of an existing application (col.5, FIG. 2, user-interface of application SMARTedit ("an existing application") as recited in claim 29, lines 1 and 6-7);

a control of the user-interface of the existing application (e.g., col.5, FIG. 2, said user-interface of application SMARTedit includes 4 buttons and one text display);

(i) record a procedure description comprising a series of actions (e.g., col.4: 29-34; col.4: 47- col.5: 26; col.12:56 - col.13: 6)

performed by a user in the application user-interface (e.g., col.4:28 - col.5: 27; FIG. 2 at col.5);

"We have implemented this interface in the SMARTedit PBD system for text-editing. For example, a simple task for SMARTedit is to delete HTML comments from a text file. <u>A user</u> demonstrates this task by <u>starting the macro recorder</u>, moving the cursor to the next comment, selecting the comment with the shift and cursor keys, and pressing the delete key to delete it (Figure 2). <u>She then stops the macro recorder</u>. After this demonstration, one of SMARTedit's candidate programs is <u>a program consisting of three actions</u> of the form \move to the next occurrence of <!--, select to the next occurrence of -->, and delete the selection)" – col.4: 59 – col.5: 25, emphasis added;

(ii) in response to the recording operation, customizing the control of the user-interface of the existing application (e.g., col.12, lines 8-23, an "enhanced" SMARTedit user-interface <u>by installing an "enhanced" SMARTedit application</u> (SMARTedit enhanced with DIAManD now has been installed and has a screenshot as illustrated in FIG. 4), which now has a <u>new Interaction Control Panel</u>; wherein the new Interaction Control Panel is related to the macro recorded in FIG. 2, i.e., "specific to the procedure description in the existing application" as claimed)

by installing a user-interface control specific to the procedure description in the existing application (e.g., col.13: 5-37; FIG. 4, col.12:12 - col.13: 6

col.4: 59 – col.5: 25 above, "<u>After this demonstration, ...</u>" ("*specific to the procedure description...*" as claimed);

col.5, FIG. 2, an <u>original user interface</u> of SMARTedit application;

col.12, FIG. 4, an <u>enhanced/customized user interface</u> of SMARTedit application;

col.13: 5-21: the enhanced/customized user interface in FIG. 4 includes

"Step", a collaborative solution mode. We also introduced three entirely new interaction modes:

- "Run to end of example" successively presents the system's guesses for each step up to the end of the current example. After a brief pause to allow the user to interrupt, the system commits the guess. This interaction mode is from the system solution category.

- The "Run while sure" interaction immediately executes the learned program step by step until the system's confidence in the program at any step drops below a threshold (currently 99.9%). This interaction is a performance mode.

- Finally, we introduced system example selection in the form of the "Jump and record an example" mode. In this mode, the system repositions the cursor to just before an example that is particularly confusing to the system and asks the user to demonstrate that example.

for automatic execution of the procedure description and generation of the series of actions performed by the user when the user-interface control is activated (e.g., col.13: 7-27; col.1: 1-28; col.4; 59 - col.5: 26).

Claim 31:

The rejection of claim 29 is incorporated. Wolfman explicitly teaches "*the operation of recording a procedure description performed by the user in the application user-interface comprises the step of registering the procedure capturer with the operating system to receive notification of user actions and system actions*" (e.g., col.5: 18-26, the macro recorder embedded in application SMARTedit must have been registered with the operating system to be able to record said keystrokes, cursor keys, and mouse clicks, all of which are managed by said operating system).

Claim 32:

The rejection of claim 29 is incorporated. The examiner respectfully disagrees with Appellants' assertion. Wolfman explicitly teaches "*the operation of recording a procedure description performed by the user in the application user-interface comprises*

the steps of: receiving notification of user action within the application interface at the procedure capturer; determining a result activated by user action at the procedure capturer; mapping the activated control into a generic description at the procedure capturer adding the generic description to a procedure representation at the procedure capturer; determining if there are more user actions; and storing the procedure representation in the procedure capturer if there are no more user actions (e.g., col.4: 60 – col.5: 26,

> "For example, a simple task for SMARTedit is to delete
> HTML comments from a text file. A user <u>demonstrates this task by</u>
> <u>starting the macro recorder, moving the cursor</u> to the next
> comment, selecting the comment with the <u>shift and cursor keys</u>,
> and <u>pressing the delete key</u> to delete it (Figure 2). She then <u>stops</u>
> <u>the macro recorder</u>. After this demonstration, one of SMARTedit's
> candidate programs is a program consisting of three actions of the
> form: move to the next occurrence of <!--, select to the next
> occurrence of -->, and delete the selection." (emphasis added).

Claim 34:

The rejection of claim 29 is incorporated. Wolfman explicitly teaches *"the at least one processor is further operative to execute an installed control"* (e.g., col.12, lines 8-23, an "<u>enhanced</u>" SMARTedit user-interface <u>by installing an "enhanced" SMARTedit</u> <u>application</u> (SMARTedit enhanced with DIAManD now has been installed and has a screenshot as illustrated in FIG. 4), which now has a <u>new Interaction Control Panel</u>; wherein the new Interaction Control Panel is related to the macro recorded in FIG. 2, i.e., "relating to the procedure description in the existing application" as claimed).

Claim 35:

The rejection of claim 29 is incorporated. Wolfman explicitly teaches *"the operation of installing the user-interface control comprises the step of altering the appearance of at least one existing user interface control"* (e.g., col.5, FIG. 2,

screenshot of the original SMARTedit; col.12, FIG. 4, screenshot of the enhanced SMARTedit).

Claim 36:

Claim 36 is an article of manufacture version, which recites the same limitations as those of claim 29, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 36.

Claim 37:

Claim 37 is a method version, which recites the same limitations as those of claim 29, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 37.

Claim Rejections – 35 USC §103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolfman in view of Van De Venter (art of record, US Patent No. 5,748,975).

Claim 30:

The rejection of claim 29 is incorporated. Wolfman discloses recording keystrokes, cursor moves, and mouse clicks (col.4: 49-54, col.5: 10-17; col.10: 46-54)

does not explicitly disclose *the operation of recording a procedure description performed by a user in the application user-interface comprises the steps of transmitting at least one request for application user-interface structure information from a procedure capturer to an operating system and receiving the application user-interface structure information from the operating system at the procedure capturer.*

However, in an analogous art, Van De Vanter further discloses *the operation of recording a procedure description performed by a user in the application user-interface comprises the steps of:*

transmitting at least one request for application user-interface structure information (e.g., FIG. 1, col.8: 33-67, Input Device 112 generates events from keystroke, cursor, mouse, each event has particular data structure)

from a procedure capturer to an operating system (e.g., FIG. 1, col.7: 25-46, Input Device 112 sends events to Operating System 120 and Keystroke Executive 130, col.7: 46 - col.8: 11) *and*

receiving the application user-interface structure information from the operating system at the procedure capturer (e.g., FIG. 2, col.9: 42-59, Operating System 120 and Keystroke Executive 130 send said event information to Typographical Display Processor 170 and Display 118, col.9: 8-41).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Van De Vanter's teaching into Wolfman's teaching. One would have been motivated to do so to record event stream such as keystrokes, mouse/cursor clicks, which are managed/controlled by the operating system as suggested by Van De Vanter (e.g., col.7: 25-46).

9. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolfman in view of Huang (art of record, US Patent Publication No. 2004/0078682 A1).

Claim 33:

The rejection of claim 29 is incorporated. Wolfman does not explicitly disclose *the operation of installing the control relating to the procedure description in the existing*

application comprises the steps of sending a request to an operating system from a control installer to install the control; creating and installing the control in the application user-interface through the operating system; and registering a callback at the operating system using a location supplied by the control installer.

However, in an analogous art, Huang further discloses *the operation of installing the control relating to the procedure description in the existing application comprises the steps of:*

> *sending a request to an operating system from a control installer to install the control* (e.g., [0005], [0050])*;*

> *creating and installing the control in the application user-interface through the operating system* (e.g., [0007], [0019], [0050])*; and*

> *registering a callback at the operating system using a location supplied by the control installer* (e.g., [0009], [0012])*.*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Huang's teaching into Wolfman's teaching. One would have been motivated to do so to register a callback function for understanding whether a hardware status has been changed is to use the polling or interrupt mechanism to trigger the registered callback function as suggested by Huang (e.g., [0012]).

Conclusion

10. **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication should be directed to examiner Thuy (Twee) Dao, whose telephone/fax numbers are (571) 272 8570 and (571) 273 8570, respectively. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Twee Dao/   /Tuan Q. Dam/
Examiner, Art Unit 2192   Supervisory Patent Examiner, Art Unit 2192